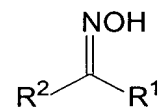


## CLAIMS

1. A solvent extraction composition comprising one or more orthohydroxyarylaldoximes and one or more orthohydroxyarylketoximes, and one or more equilibrium modifiers in an amount providing a degree of modification of the orthohydroxyarylaldoximes present of from about 0.2 to 0.61.

2. A solvent extraction composition according to Claim 1 wherein the degree of modification is from about 0.4 to 0.6.

3. A solvent extraction composition according to any one of Claims 1 or 2 wherein the orthohydroxyarylketoximes are compounds of formula:



Formula (1)

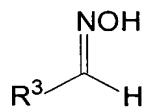
wherein

$\text{R}^1$  is an optionally substituted hydrocarbyl group

$\text{R}^2$  is an optionally substituted ortho-hydroxyaryl group,

and salts thereof,

and the orthohydroxyarylaldoxime are compounds of the formula:



Formula (2)

wherein

$\text{R}^3$  is an optionally substituted ortho-hydroxyaryl group,

and salts thereof.

4. A solvent extraction composition according to Claim 3 wherein the orthohydroxyarylketoxime is a 5-( $\text{C}_8$  to  $\text{C}_{14}$  alkyl)-2-hydroxyacetophenone oxime, and the orthohydroxyarylaldoxime is a 5-( $\text{C}_8$  to  $\text{C}_{14}$  alkyl)-2-hydroxybenzaloxime.

5. A solvent extraction composition according to any one of Claims 1 or 2 wherein the equilibrium modifiers are alkylphenols, alcohols, esters, ethers and polyethers, carbonates, ketones, nitriles, amides, carbomates, sulphoxides, or salts of amines and quaternary ammonium compounds.

6. A solvent extraction composition according to Claim 5 wherein one or more equilibrium modifiers selected from 2,2,4-trimethyl-1,3-pentanediol mono-isobutyrate, 2,2,4-trimethyl-1,3-pentanediol mono-benzoate, 2,2,4-trimethyl-1,3-pentanediol di-isobutyrate, 2,2,4-trimethyl-1,3-pentanediol di-benzoate, di-butyl adipate, di-pentyl adipate, di-hexyl adipate, isobutyl heptyl ketone, nonanone, 2,6,8-trimethyl-4-nonanone, diundecyl ketone, 5,8-diethyldodecane-6,7-dione, tridecanol, and nonyl phenol are employed.

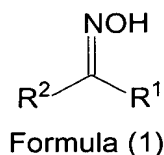
7. A solvent extraction composition according to Claim 6 wherein the orthohydroxyarylketoxime is 2-hydroxy-5-nonylbenzophenone oxime, and the orthohydroxyarylaldoxime is 2-hydroxy-5-nonylsalicylaldoxime and equilibrium modifier is 2,2,4-trimethyl-1,3-pentanediol di-isobutyrate.

8. A process for the extraction of a metal from solution in which an acidic solution containing a dissolved metal is contacted with a solvent extraction composition, whereby at least a fraction of the metal is extracted into the organic solution, characterised in that the solvent extraction composition comprises a water immiscible organic solvent, one or more orthohydroxyarylaldoximes and one or more orthohydroxyarylketoximes, and one or more equilibrium modifiers in an amount providing a degree of modification of the orthohydroxyarylaldoximes present of from about 0.2 to 0.61.

9. A process according to Claim 8 wherein the metal is copper, cobalt, nickel, manganese or zinc.

10. A process according to Claim 9 wherein the degree of modification is from about 0.4 to 0.6.

11. A process according to any one of Claims 8, 9 or 10 wherein the orthohydroxyarylketoximes are compounds of formula:



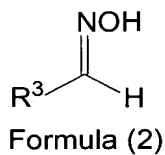
wherein

R<sup>1</sup> is an optionally substituted hydrocarbyl group

R<sup>2</sup> is an optionally substituted ortho-hydroxyaryl group,

and salts thereof,

and the orthohydroxyarylaldoxime are compounds of the formula:



wherein

R<sup>3</sup> is an optionally substituted ortho-hydroxyaryl group,

and salts thereof.

12. A process according to Claim 11 wherein the orthohydroxyarylketoxime is a 5-(C<sub>8</sub> to C<sub>14</sub> alkyl)-2-hydroxyacetophenone oxime, and the orthohydroxyarylaldoxime is a 5-(C<sub>8</sub> to C<sub>14</sub> alkyl)-2-hydroxybenzaloxime.

13. A process according to any one of Claims 8, 9 or 10 wherein the equilibrium modifiers are alkylphenols, alcohols, esters, ethers and polyethers, carbonates, ketones, nitriles, amides, carbamates, sulfoxides, or salts of amines and quaternary ammonium compounds.

14. A process according to Claim 13 wherein one or more equilibrium modifiers are selected from 2,2,4-trimethyl-1,3-pentanediol mono-isobutyrate, 2,2,4-trimethyl-1,3-pentanediol mono-benzoate, 2,2,4-trimethyl-1,3-pentanediol di-isobutyrate, 2,2,4-trimethyl-1,3-pentanediol di-benzoate, di-butyl adipate, di-pentyl adipate, di-hexyl adipate, isobutyl heptyl ketone, nonanone, 2,6,8-trimethyl-4-nonanone, diundecyl ketone, 5,8-diethyldodecane-6,7-dione, tridecanol, or nonyl phenol.

15. A process according to Claim 14 wherein the orthohydroxyarylketoxime is 2-hydroxy-5-nonylbenzophenone oxime, and the orthohydroxyarylaldoxime is 2-hydroxy-5-nonylsalicylaldoxime and equilibrium modifier is 2,2,4-trimethyl-1,3-pentanediol diisobutyrate.